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ABSTRACT

This report is published every other year in an effort to evaluate Tidewater Community College's (TCC) (Virginia) effectiveness in preparing students for transfer. It provides an analysis of TCC students who transferred to a four-year institution in Virginia beginning in fall 1999 or fall 2000. Students must have completed 12 or more credits at TCC prior to transferring, and they must have been enrolled at TCC in the year immediately preceding transfer. This report presents findings from the analysis of 833 students. Almost 80% of those students transferred to either Old Dominion University (55%), Norfolk State University (14%), or Virginia Commonwealth University (9%). There was a 4% increase in the numbers of African-American transfer students, consistent with the increasing enrollment of African-American students. Grade point average (GPA) performance of students who transfer to Old Dominion University (ODU) is equivalent to the GPA of the university's native students. Former TCC students have an average GPA of 2.72 during their first year at ODU, compared with 2.70 in 2001 and 2.74 in 2000 for all ODU native students of junior status. At most institutions, performance dropped slightly compared to the performance at TCC, demonstrating the transfer shock average decline that frequently occurs when community college students transfer to four-year institutions. Survey instrument appended. (NB)

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1999–00 and 2000–01 Academic Years

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October 2002

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TIDEWATER COMMUNITY COLLEGE

Biennial Transfer Student Report

1999–00 and 2000–01 Academic Years

Office of Student Outcomes Assessment
Tidewater Community College
121 College Place
Norfolk VA 23510

October 2002

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BIENNIAL TRANSFER STUDENT REPORT
EXECUTIVE SUMMARY

In order to evaluate Tidewater Community College's (TCC) effectiveness in preparing students for transfer, the Office of Student Outcomes Assessment publishes the Transfer Student Report each biennium. This biennial report provides an analysis of TCC students who transferred to a four-year institution in Virginia beginning in fall 1999 or fall 2000. In order to determine the impact that a student's education at TCC had on performance at the transfer institution, the student must have completed 12 or more credits at TCC prior to transferring, and the student must have been enrolled at TCC during the year immediately preceding transfer. Major findings from the analysis of 833 students included in this study revealed the following:

- Almost 80% of TCC students transferred to one of three universities: Old Dominion University (55%), Norfolk State University (14%), and Virginia Commonwealth University (9%).

- Consistent with the increasing enrollment of African-American students is an increase in African-American students who transferred, from 14% in the last biennium report, to 18% in the current report. Likewise, the percentage of Asian transfers increased from 7% to 10%.

- GPA performance of TCC students who transfer to ODU, which account for the majority of transfer students, is equivalent to the GPA performance of ODU's native students. During their first year at ODU, the average GPA for former TCC students was 2.72, compared to 2.70 in 2001 and 2.74 in 2000 for all ODU native students of junior status.

- Overall, transfer students were in good academic standing with an average GPA of 2.00 or greater. At most institutions, performance dropped slightly compared to performance at TCC prior to transfer, demonstrating the "transfer shock" average decline that frequently occurs when community college students transfer to four-year institutions. In an exception to this pattern, the average GPA of students who transferred to NSU increased after transfer.

- Prior to transfer, more than two-thirds of the students were enrolled in General Studies (25%), Science/Computer Science (16%), Business Administration (15%), or Social Science (14%) at TCC.

- Almost one-half of students who transferred completed a degree at TCC (46%).

- The acceptance rate at Old Dominion University, Radford University, University of Virginia, and Virginia Polytechnic Institute and State University was higher for TCC graduates compared to non-graduates.

- Graduates had a significantly higher average GPA at the four-year institutions (2.89) compared to non-graduates (2.63).

- Sixty-five percent (65%) of transfer students completed developmental English or mathematics courses at TCC prior to transfer. Thirty-five percent (35%) of transfer students enrolled in developmental English, and 59% enrolled in developmental mathematics.

- There was a significant difference in the average GPA at the four-year institution for students who enrolled in developmental English at TCC as compared to those who did not. However, the difference in GPA at the four-year institution for developmental and nondevelopmental mathematics students was not significantly different.

- According to the Transfer Survey, administered to 1999-00 transfer students, 89% of students were able to attend the college of their first choice. Seventy-five percent (75%) of students reported that all of their TCC credits were accepted at the transfer institution, and 84% indicated that there were no major problems associated with the transfer.

- Eighty-seven percent (87%) of students responding to the survey indicated that they were attending a four-year institution as of spring 2001, and 96% expected to complete their four-year degree.

- Ninety-three percent (93%) of students rated the preparation they received at TCC for transfer as excellent, very good, or good.

- Nearly all students (97%) indicated that they would recommend TCC to a friend or acquaintance.

BIENNIAL TRANSFER STUDENT REPORT
1999-00 AND 2000-01 ACADEMIC YEARS

INTRODUCTION

According to several sources, the majority of students who enroll at Tidewater Community College (TCC) do so with the intention to transfer to another college or university. For example, in the 2002 ACT Student Opinion Survey, 50% of TCC students indicated that their purpose for entering TCC was to complete courses necessary for transfer to a four-year institution. Additionally, according to the 2001 Transfer Survey, 77% of TCC students who transferred to a four-year institution indicated that their primary educational objective when first enrolling at TCC was to prepare to transfer. This is a slight increase from the 1999 Transfer Survey where 74% of students indicated that transferring was their primary objective. Part of TCC's mission core is to prepare these students for successful completion of a baccalaureate degree. As one indicator of accountability, preparation is measured by student outcomes at the transfer institution.

In order to address TCC's effectiveness in preparing students for transfer, performance data from the transfer institutions must be shared with TCC. To encourage this process, the State Council of Higher Education for Virginia (SCHEV) established Guideline 8. Guideline 8 sets forth standards that facilitate information sharing between four-year institutions and community colleges and specifies that all four-year institutions should provide transfer student data to the previously attended two-year institution. On an aggregate level, four-year institutions are required to provide data about acceptance and enrollment rates. Data on individual students enrolled at the four-year institution should also be provided. This includes data on the student's major at the four-year institution, the number of credit hours accepted from the community college, the number of credit hours attempted and earned at the four-year institution, and the cumulative grade point average (GPA). In addition, data on courses taken at the four-year institution and the student's performance in each course should be included.

This transfer report provides an analysis of TCC students who transferred to a four-year institution in Virginia beginning in fall 1999 or fall 2000. In order to determine the impact that a student's education at TCC had on his or her performance at the four-year institution, certain conditions must have been met for a student to be considered a transfer student and represented in this analysis. First, the student must have completed a minimum of 12 credit hours at TCC prior to transferring. Second, the student must have been enrolled at TCC during the year immediately preceding transfer to the four-year institution. For example, students entering a four-year institution in fall 1999 must have been enrolled at TCC between summer 1998 and summer 1999. Similarly, students entering a four-year institution in fall 2000 must have been enrolled at TCC between summer 1999 and summer 2000.

The Transfer Student Report has two components. The first and largest component is based on performance data provided by the four-year institutions. The second component is based on a survey of transfer students. This transfer survey aims to capture the students' perspectives on the transfer process. The transfer survey was mailed to students who entered a four-year institution in the 1999-2000 academic year as indicated by data received as of spring 2001 from the four-year institutions. Together, the two components provide a broader perspective from which to examine the transfer process.

A number of issues are addressed in this report. First, an overview of the transfer process is presented including the number of students who transferred and the institutions to which they transferred. Second, for institutions providing data, acceptance and enrollment rates are presented. Third, the performance of TCC graduates and non-graduates is compared. This section focuses on whether graduates are better prepared for successful transfer compared to non-graduates. Fourth, students' curricula at TCC and their performance at the transfer institutions is examined. This section addresses whether students enrolled in transfer programs (AA/AS) are better prepared for transfer compared to students enrolled in occupational/technical programs (AAS/certificates). Another issue that is examined is the relationship between ethnicity and performance at four-year institutions. The relationship between developmental education at TCC and subsequent performance at the transfer institution is also presented. This section focuses on how students who took developmental English or developmental mathematics courses at TCC performed compared to those who did not take developmental courses. Finally, the results of the 2001 transfer survey that focuses on student perceptions of the transfer process are summarized.

OVERVIEW OF THE TRANSFER PROCESS

A transfer student, as defined for this report, is one who completed a minimum of 12 credit hours at TCC prior to transfer, attended TCC within the year prior to transfer, and enrolled in courses at the four-year institution. Based on this definition, there were 428 transfer students in the fall 1999 semester and 405 transfer students in the fall 2000 semester. Therefore, this report will concentrate on a total of 833 students who transferred from TCC during the 1999-2001 reporting period. An additional 450 students applied for transfer to a four-year institution but did not enroll at the school to which they applied.

Of the 15 four-year institutions required to report transfer data to TCC, 12 institutions provided data concerning students who enrolled at their institution (see Appendix A for a list of abbreviations). The majority of TCC students (n=461) transferred to Old Dominion University (ODU). Norfolk State University (NSU) was the second largest transfer institution (n=114). For this reporting period, Virginia Commonwealth University (VCU) was the third largest transfer institution with 78 transfers. For VCU, this represents an increase from 0.5% of all transfer students in the 1996-1998 reporting period to 9% for the 1999-2001 reporting period. While Christopher Newport University (CNU) dropped to the fourth largest transfer institution this reporting period with 8% of all transfers, this percentage represents a slight increase from the previous reporting period where 7% of students transferred to CNU. The percentage of TCC students who transferred to each of the four-year institutions is summarized in Figure 1.

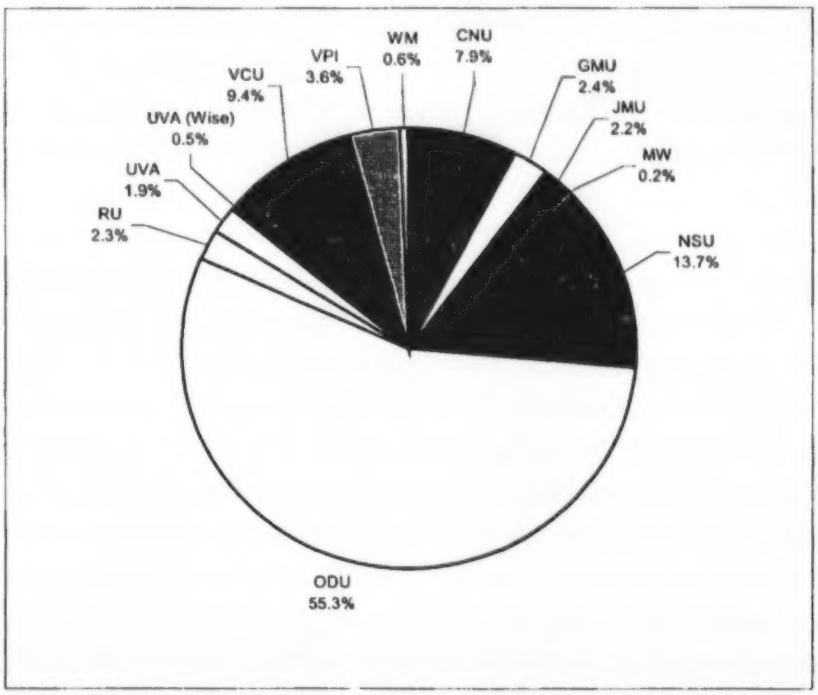

FIGURE 1. 1999-2001 Transfers by Institution

TCC transfer students were enrolled in several degree programs before transfer. The Associate in Arts (AA) and Associate in Science (AS) degree programs are designed to prepare students for transfer. The Associate in Applied Science (AAS) degree programs and certificate programs can also lead to transfer, although they are occupational/technical programs designed to prepare students for specific career fields. Overall, the majority of students (74%) were enrolled in an AS degree program before transfer. Ten percent (10%) of transfers were enrolled in an occupational/technical program (AAS/certificate), 7% were enrolled in an AA degree program, and 8% were not classified in a specific program of study.

After transferring to a four-year institution, TCC students declared over 80 different majors. An additional 9% of students were undecided. The most frequently declared major was Nursing (9%) followed by Business Administration and Psychology (6% each). Figure 2 charts the majors declared by at least 2% of students.

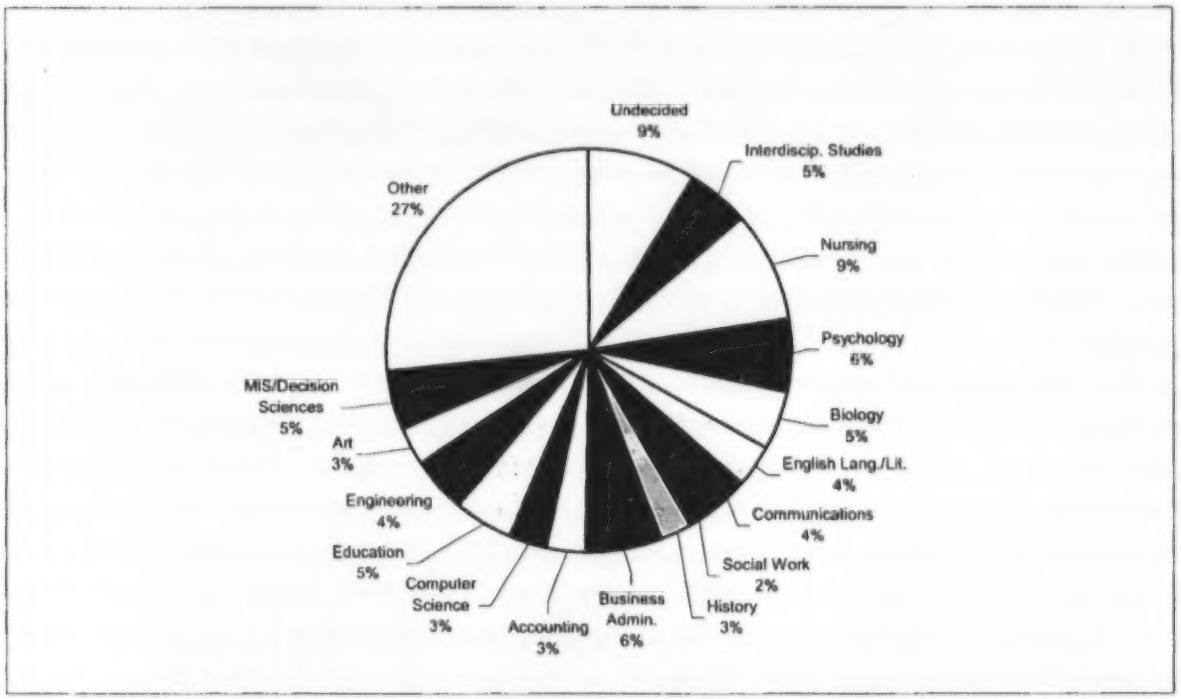

FIGURE 2. Transfer Majors at the Four-Year Institutions

After transferring to a four-year institution, the average GPA at all institutions was at least 2.00. At the majority of institutions, performance dropped slightly demonstrating the "transfer shock" average decline that is often reported in the literature (Diaz, 1992)[1]. Students at the University of Virginia (UVA), James Madison University (JMU), The College of William and Mary (WM), and Mary Washington College (MW) showed the greatest average change in GPA after transferring. Students transferring to Norfolk State University (NSU) experienced an average increase in GPA. Figure 3 details average performance at TCC, the transfer institutions, and the change in GPA.

[1] Diaz, P. (1992). Effects of transfer on academic performance of community college students at the four-year institution. *Community/Junior College Quarterly of Research and Practice*, 16(3), 279-291.

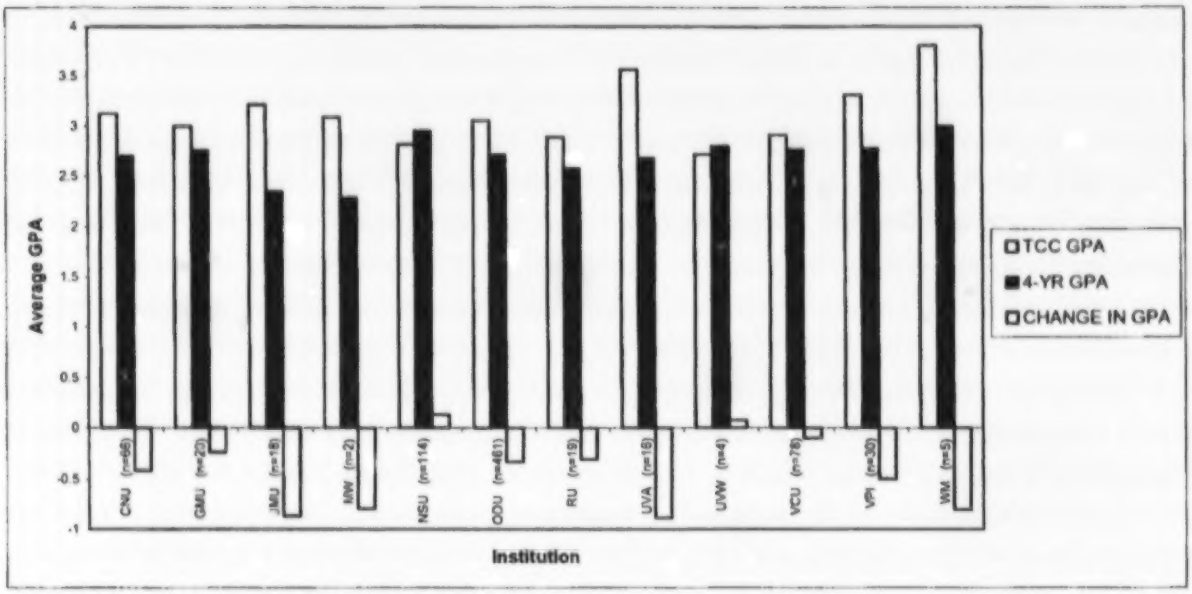

FIGURE 3. Transfer Student GPA by Institution

Due to the fact that the majority of TCC students transfer to ODU, the performance of these students compared to the performance of ODU's native students is especially important. It is difficult to directly compare performances of native ODU students and TCC students who transfer to ODU due to various factors that can influence GPA, such as a student's class standing, the curriculum in which the student is enrolled, and the number of credit hours completed. However, it is important to note that the performance of students who transfer to ODU from TCC is similar to that of students who began their education at ODU. During their first year at ODU, the average GPA for former TCC students was 2.72. According to information provided by ODU, the average GPA for all ODU native students of junior status was 2.74 for 2000 and 2.70 for 2001.

ACCEPTANCE AND ENROLLMENT RATES

Of the 12 institutions providing transfer data, only six (ODU, RU, UVA, VCU, VPI, and WM) provided data concerning acceptance and enrollment rates. Figure 4 displays acceptance rates at each of the institutions reporting acceptance data. ODU had the highest acceptance rate of TCC students (91%) while UVA and Virginia Tech (VPI) had the lowest acceptance rates (36% and 39%, respectively). This pattern is consistent with results from the 1996-1998 Transfer Student Report.

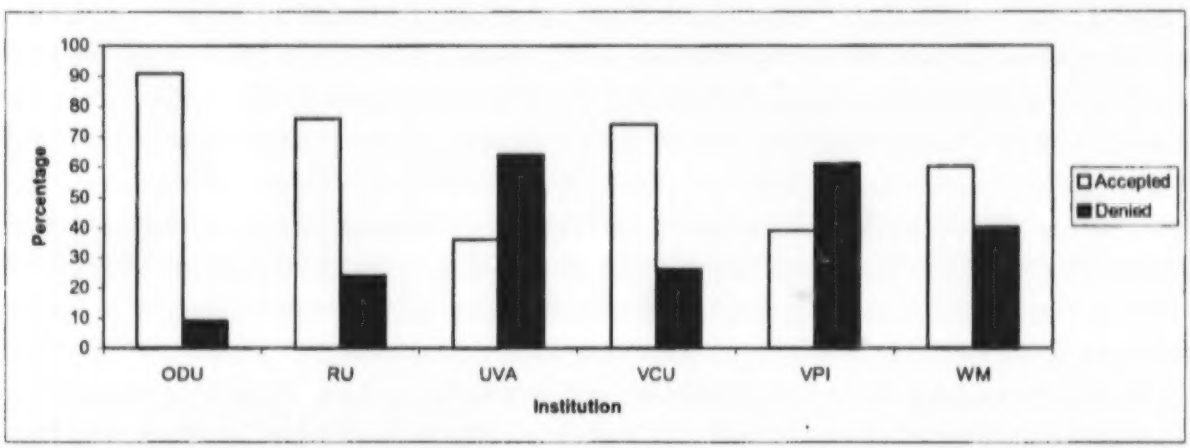

FIGURE 4. Acceptance Rates of TCC Students

While UVA and VPI have the lowest acceptance rates, these two schools have the highest enrollment rates for students who have been accepted. VPI's enrollment rate was 97%, and UVA's enrollment rate was 76%. This is consistent with the results from the 1996-1998 Transfer Student Report where VPI had an enrollment rate of 100% and UVA had an enrollment rate of 92%. Given that ODU is TCC's largest transfer institution and that ODU consistently has a high acceptance rate of TCC students, it would be expected that enrollment rates would be fairly high as well. ODU's enrollment rate this period was 72%, which is lower than the enrollment rate of 82% reported in the 1996-1998 Transfer Student Report. This could be a result of students applying to more than one transfer institution and choosing to enroll in another institution after being accepted. Figure 5 displays enrollment rates for each institution that reported this data.

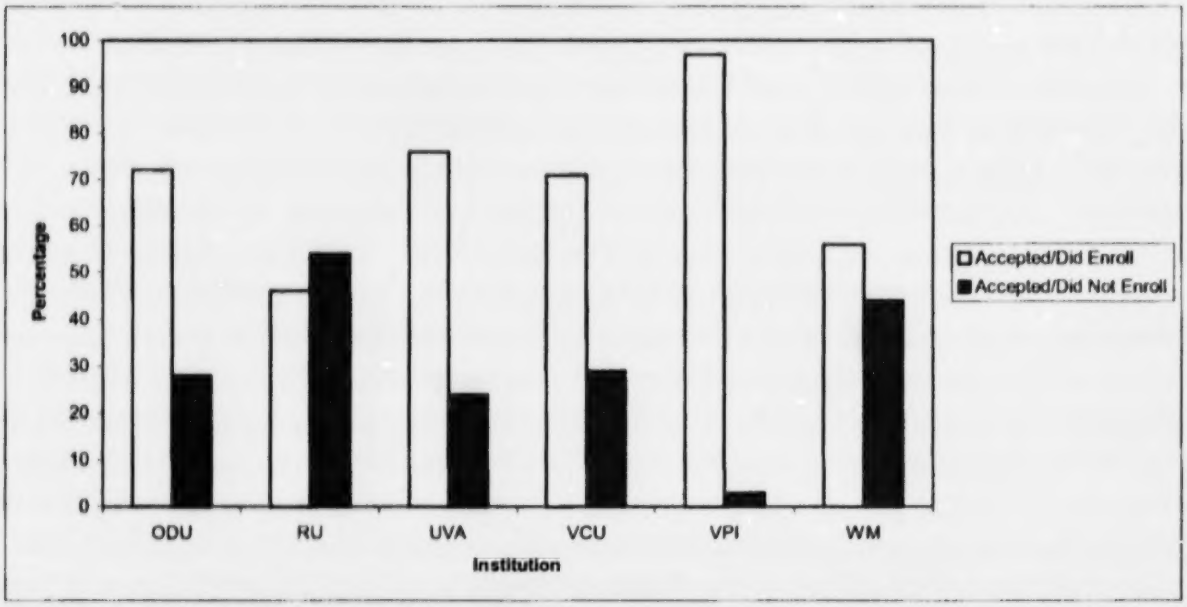

FIGURE 5. Enrollment of Accepted TCC Students

TCC GRADUATES VS. NON-GRADUATES

Almost one-half of students who transferred completed a degree at TCC (46%, n=382). This is a large increase from the 1996-1998 transfer period when only 23% of transfer students graduated from TCC prior to transferring. In order to evaluate the importance of obtaining a degree from TCC, acceptance rates for graduates and non-graduates can be compared for the select group of institutions providing acceptance data. Performance of graduates and non-graduates at the four-year institutions can also be compared.

An examination of acceptance rates by graduate status at TCC prior to transfer shows that acceptance rates vary by school. As shown in Table 1, acceptance rates for graduates are higher than for non-graduates at most of the institutions reporting this data. However, at VCU and WM, the acceptance rate for non-graduates was higher than for graduates.

TABLE 1

Acceptance Rates for TCC Graduates and Non-Graduates by Institution						
Institution	Graduate Acceptance Rate		# of Graduates	Non-Graduate Acceptance Rate		# of Non-Graduates
ODU	97%	(n=336)	345	85%	(n=304)	358
RU	100%	(n=10)	10	70%	(n=31)	44
UVA	55%	(n=11)	20	26%	(n=10)	38
VCU	59%	(n=24)	41	80%	(n=86)	108
VPI	66%	(n=19)	29	24%	(n=12)	51
WM	55%	(n=6)	11	75%	(n=3)	4

Overall, data showed that graduates had a significantly higher average GPA at the four-year institutions (2.89) compared to non-graduates (2.63), $t(830)=4.08$, $p<.0001$. Graduates also had a significantly higher GPA at TCC prior to transfer (3.14) compared to non-graduates (2.95), $t(831)=5.33$, $p<.0001$. Table 2 shows the number of graduates and non-graduates at each transfer institution along with both groups' average GPA earned at each institution. For all schools except VPI and UVA, students who graduated from TCC prior to transferring had higher average GPAs than transfers who did not graduate from TCC. While some sample sizes are relatively small and results should be interpreted with caution, this is the second reporting period with results showing that students who transfer to UVA without a degree from TCC perform as well or better than students who transfer to UVA with a degree. This is an interesting finding given that the acceptance rate at UVA for TCC graduates is 55% compared to an acceptance rate of only 26% for students who did not graduate from TCC. Given the stringent UVA admissions standards, it is quite likely that the non-graduate transfers have an advanced academic background.

TABLE 2

Graduate GPA vs. Non-Graduate GPA				
Institution	Graduate GPA	# of Graduates	Non-Graduate GPA	# of Non-Graduates
CNU	2.84	30	2.60	36
GMU	3.31	5	2.58	15
JMU	2.50	6	2.27	12
MW	----	0	2.29	2
NSU	3.09	38	2.88	75*
ODU	2.86	250	2.55	211
RU	3.32	3	2.44	16
UVA	2.59	9	2.80	7
UVA @ Wise	----	0	2.80	4
VCU	3.08	17	2.69	61
VPI	2.73	19	2.86	11
WM	3.00	5	----	0

* Numbers will not add to the total number of transfers due to missing GPA information for one student.

A more detailed examination of how graduates and non-graduates performed includes the type of degree program in which the student was enrolled while at TCC. Table 3 presents GPA information for graduates and non-graduates of the college transfer degree programs (AA/AS) and occupational/technical programs (AAS/certificate). Graduates in all degree programs performed better than non-graduates at TCC as well as at the four-year institution.

TABLE 3

GPA of Graduates and Non-Graduates by Degree Program

Status	AA	AS	AAS/certificates
Four-year GPA			
Graduate	3.13 (n=22)	2.88 (n=310)	2.76 (n=38)
Non-Graduate	2.70 (n=39)	2.58 (n=306)	2.67 (n=47)
TCC GPA			
Graduate	3.14 (n=22)	3.15 (n=310)	3.18 (n=38)
Non-Graduate	2.99 (n=39)	2.89 (n=307)	3.02 (n=47)

TCC CURRICULUM

TCC students were enrolled in various curricula before transferring to a four-year institution. The greatest portion of transfers (25%) was enrolled in the General Studies curriculum before transferring. The Science/Computer Science curriculum was the second largest (16%), followed closely by Business Administration (15%). Figure 6 offers a complete picture of enrollment patterns in TCC curricula before transfer. The Occupational/Technical category shown in Figure 6 includes all AAS and certificate programs, and the Unclassified category includes coursework for personal satisfaction, career exploration, upgrading employee skills, and non-degree transfer.

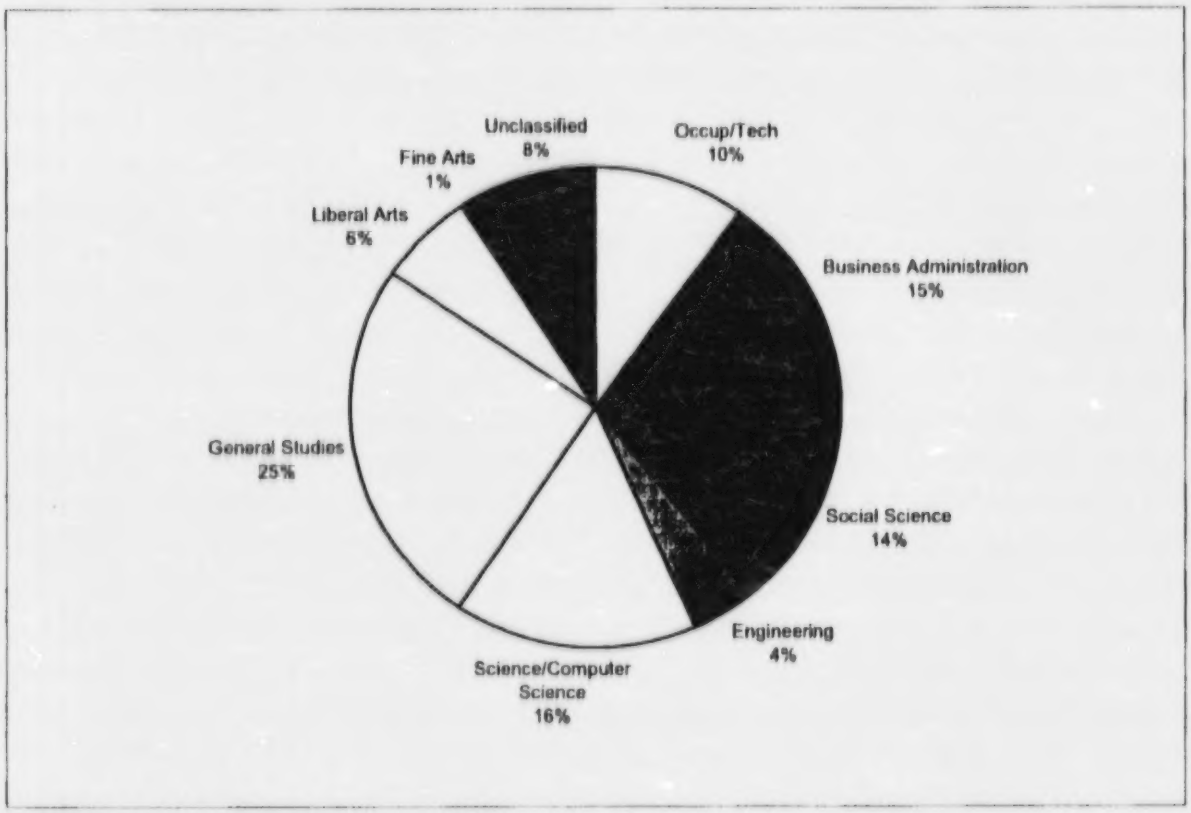

FIGURE 6. TCC Curricula Prior to Transfer

An important question is how enrollment in various curricula prepares TCC students for successful transfer to four-year institutions. Figure 7 illustrates how GPA at TCC and at the four-year institution varies depending on a student's curriculum while attending TCC. In all programs except Business Administration, the average GPA change for TCC students was less than one-half of a grade point. Similar to results from the 1996-1998 reporting period, students in the Fine Arts program experienced little change in GPA.

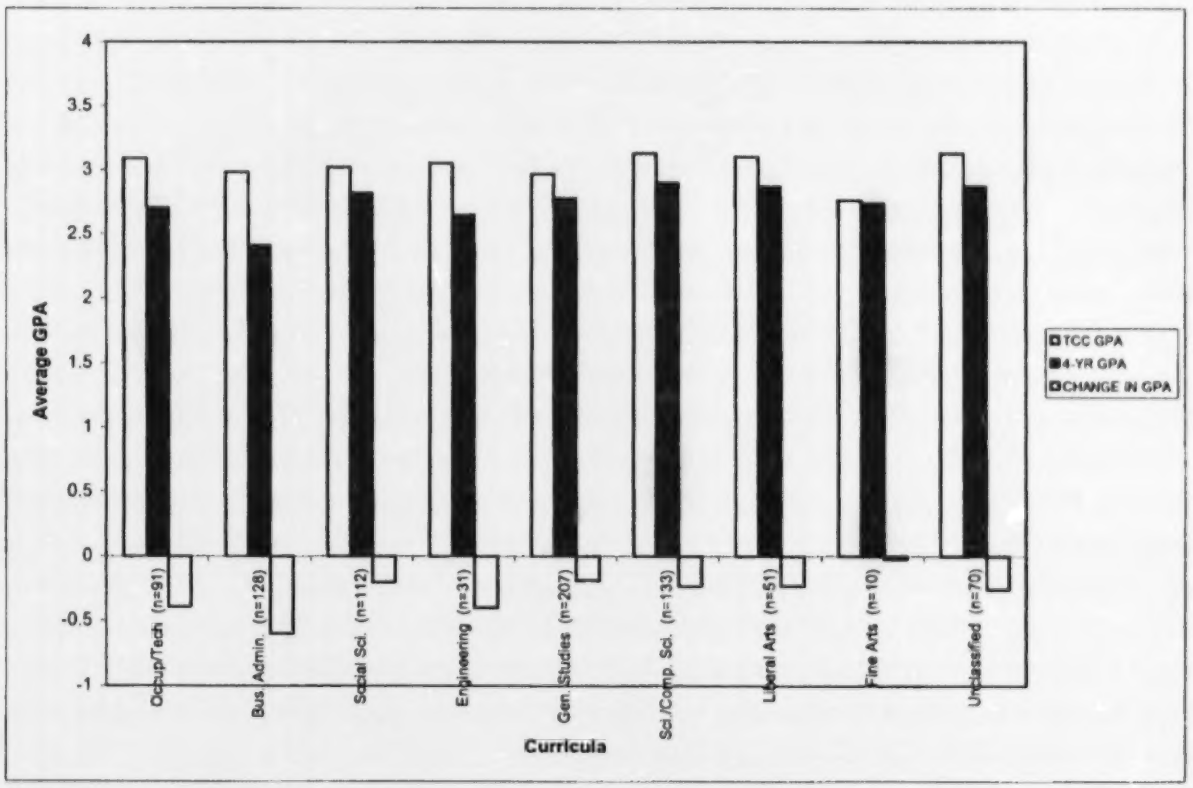

FIGURE 7. TCC Curricula and GPA

Students in all degree programs experienced a decline in GPA after transferring. Consistent with results from the 1996-1998 reporting period, students in the occupational/technical degree programs experienced the greatest change in GPA (-.39) while students in the AA degree program experienced the smallest change in GPA (-.19). Table 4 depicts the complete data.

TABLE 4

TCC Program and GPA			
Program		TCC GPA	4-YR GPA
AAS/Cert.	(n=85)	3.10	2.71
AA	(n=61)	3.04	2.85
AS	(n=617)	3.02	2.73

ETHNICITY

In the past, the Transfer Student Report included a section examining ethnicity with regard to the transfer process. The present report will continue this analysis. Specifically, this section will address questions focused on the ethnicity of the 833 TCC transfers and performance by various ethnic groups at the four-year institutions.

The following chart illustrates the ethnic background of TCC students who transferred to a four-year institution. The majority (69%) of TCC students who transferred to a four-year institution was Caucasian. Consistent with the overall increase in minority enrollment at TCC, the percentage of African-Americans who transferred also increased from 14% in the 1996-1998 reporting period to 18%. Additionally, the percentage of Asian transfer students increased from 7% to 10%.

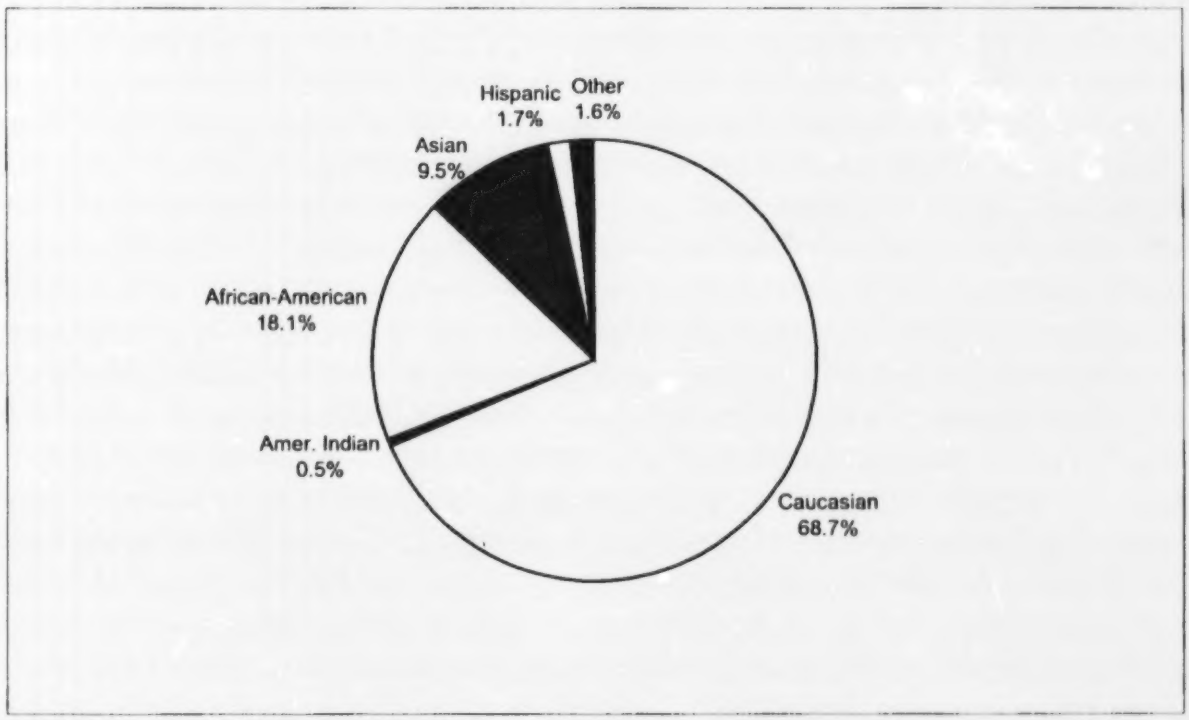

FIGURE 8. Ethnicity of Transfer Students

While overall, Caucasian students are the largest group of transfers, the ethnicity of transfer students does vary somewhat by the four-year institution attended. Table 5 presents the percentages of transfers to each four-year institution by ethnicity.

TABLE 5

Ethnicity of Transfers to Each Four-Year Institution							
Institution	Amer. Indian	African-American	Asian	Caucasian	Hispanic	Other	Total Number of Transfers
CNU	2%	15%	3%	80%	0%	0%	66
GMU	0%	0%	10%	85%	0%	5%	20
JMU	0%	6%	0%	83%	6%	6%	18
MW	0%	0%	0%	100%	0%	0%	2
NSU	2%	66%	6%	25%	0%	1%	114
ODU	<1%	11%	11%	74%	2%	1%	461
RU	0%	0%	0%	95%	0%	5%	19
UVA	0%	0%	0%	100%	0%	0%	16
UVA@Wise	0%	25%	0%	75%	0%	0%	4
VCU	0%	17%	10%	68%	3%	3%	78
VPI	0%	0%	27%	73%	0%	0%	30
WM	0%	20%	0%	60%	0%	20%	5

The majority of transfer students at each institution was Caucasian except for NSU where the majority was African-American (66%). Slightly over one-quarter (27%) of transfer students to Virginia Tech (VPI) was Asian.

Taking into account where TCC students of various ethnic backgrounds transfer, an examination of the performance of students from different ethnic groups is important in determining if TCC adequately prepares all students for successful transfer. Figure 9 displays TCC GPA and GPA at the transfer institution depending on ethnicity.

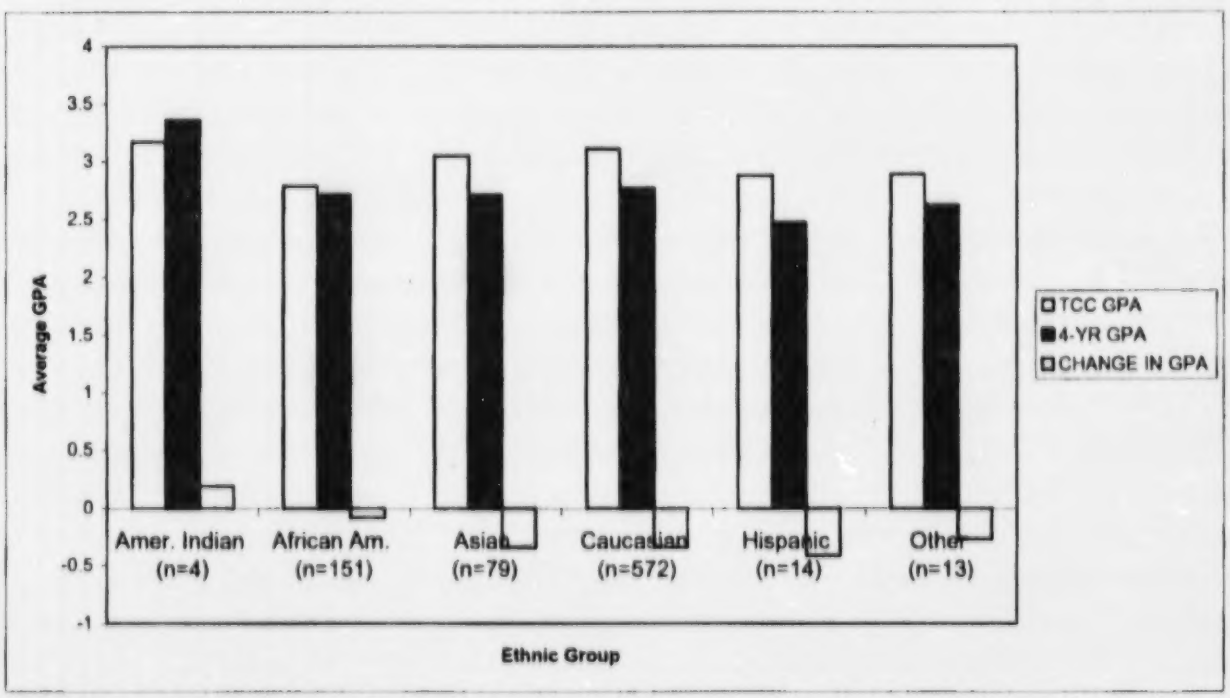

FIGURE 9. Ethnicity and Transfer Student GPA

As shown in Figure 9, African-American transfer students experienced the smallest decline in GPA after transferring while on average, the four American Indian students experienced an increase in GPA. Of all American Indian (n=4) and African-American transfer students (n=151), 50% transferred to NSU, where on average, transfer students experienced an increase in GPA. This could help explain the strong performance of these groups at the transfer institutions relative to other groups.

DEVELOPMENTAL EDUCATION AT TCC

The majority of transfer students (65%) completed developmental English or developmental mathematics at TCC before transferring to a four-year institution. Slightly over one-third of TCC transfer students enrolled in developmental English (35%), while over one-half of TCC transfer students enrolled in developmental mathematics (59%). These percentages are nearly identical to those of the previous reporting period when 31% enrolled in developmental English and 59% enrolled in developmental mathematics.

Developmental English

A comparison of GPA at TCC and the transfer institution is shown below, depending on whether developmental English was taken at TCC or not.

TABLE 6

Developmental English and GPA

English Status		TCC GPA	4-YR GPA	Change
Enrolled in Developmental English at TCC	(n=291)	2.82	2.59	.23
Not Enrolled in Developmental English at TCC	(n=542)	3.16	2.83	.33

As indicated in Table 6, students who did not take developmental English at TCC had a significantly higher cumulative GPA at TCC prior to transfer ($t(831)=9.2$, $p<.0001$) and also had a significantly higher GPA at the four-year institution ($t(830)=3.6$, $p=.0003$) compared to students who completed developmental English. The change in GPA after transferring for developmental English and nondevelopmental English students was greater for the current period compared with the change in GPA for the 1996-1998 transfer period (.12 and .18, respectively).

In order to compare performance in English courses after transfer, an examination of performance in English courses at the four-year institutions follows. After transferring, 213 TCC students enrolled in an English course at their four-year institution. Of these 213 students, 135 (63%) did not enroll in developmental English at TCC while 78 students (37%) did enroll in developmental English. Figure 10 shows the percentage of students receiving various grades in English courses depending on whether they enrolled in developmental English. For students who enrolled in more than one English course, their performance in the lowest numbered English course was used for this analysis.

As illustrated in Figure 10, a greater percentage of students who did not enroll in developmental English received A grades in English courses at the four-year institutions, while a greater percentage of students who took developmental English completed English courses with grades of B and C. These results are consistent with earlier findings in the 1996-1998 Transfer Student Report.

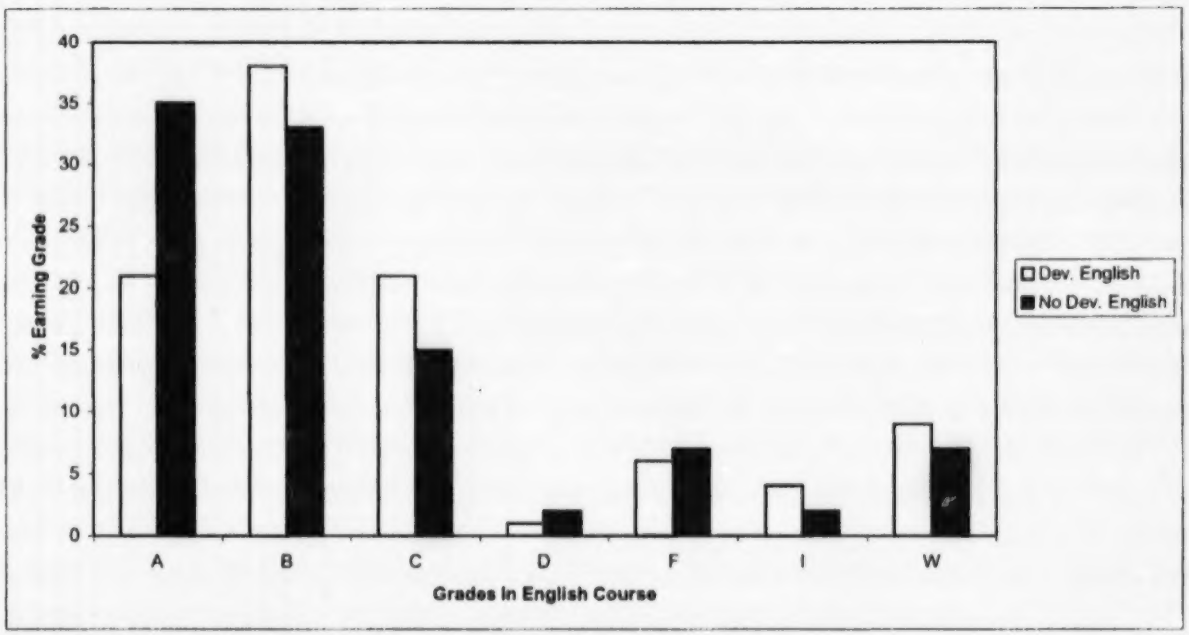

FIGURE 10. Grades in English Courses at Four-Year Institutions

Developmental Mathematics

As discussed previously, the majority of students took developmental mathematics at TCC (59%). A comparison of GPA at TCC and the transfer institution is shown below, depending on whether developmental mathematics was taken at TCC or not.

TABLE 7

Developmental Mathematics and GPA				
Mathematics Status		TCC GPA	4-YR GPA	Change
Enrolled in Developmental Math at TCC	(n=493)	2.95	2.71	.24
Not Enrolled in Developmental Math at TCC	(n=340)	3.18	2.80	.38

As indicated in Table 7, students who did not take developmental mathematics at TCC performed significantly better at TCC prior to transfer compared to students who took developmental mathematics, ($t(831)=6.4$, $p<.0001$). However, the difference in GPA at the four-year institution for developmental and nondevelopmental mathematics students was not significant, $t(830)=1.47$, $p=.14$. Thus, developmental mathematics status did not significantly influence a student's performance at the transfer institution as developmental English status did. As reported above for English courses, the change in GPA for developmental and nondevelopmental mathematics students was greater for the current period compared with the change in GPA for the 1996-1998 transfer period (.14 and .18, respectively).

In order to compare performance in mathematics courses after transfer, an examination of performance in mathematics courses at the four-year institutions follows. After transferring, 189 TCC students enrolled in a mathematics course at their four-year institution. Of these 189 students, 71 students (38%) did not take developmental mathematics at TCC while 118 students (62%) did take developmental mathematics. Figure 11 shows the percentage of students receiving various grades in mathematics courses depending on whether they enrolled in developmental mathematics. For students who enrolled in more than one mathematics course, their performance in the lowest numbered course was used for this analysis.

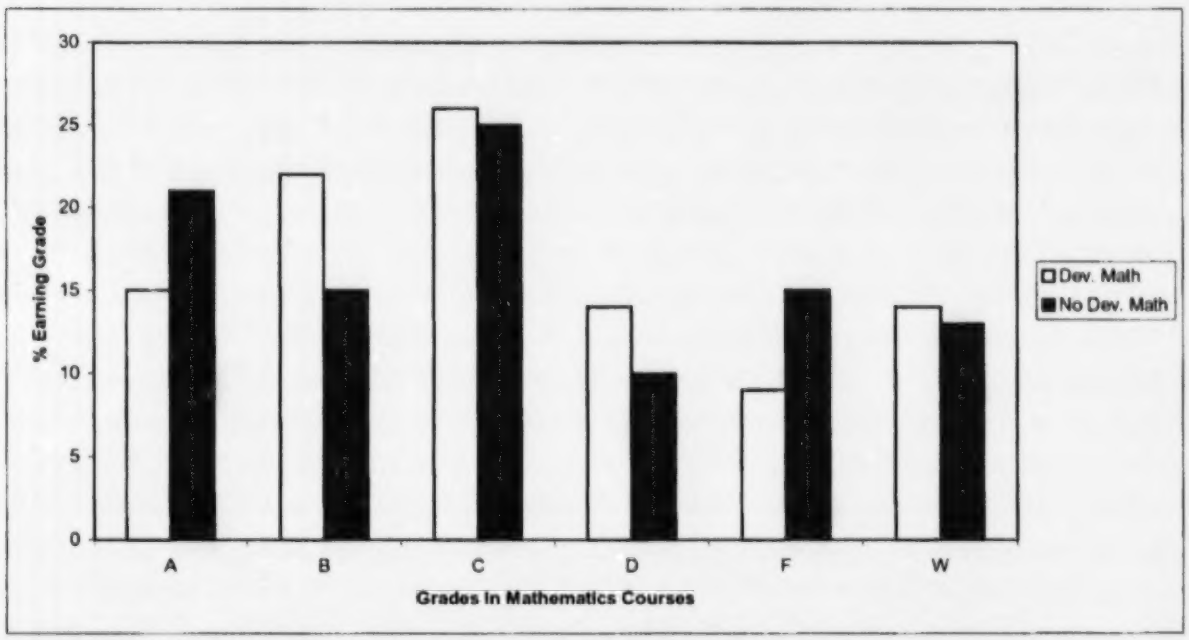

FIGURE 11. Grades in Mathematics Courses at Four-Year Institutions

As depicted above, a greater percentage of students who did not take developmental mathematics at TCC prior to transfer received grades of A. However, a greater percentage of these students also received F grades compared to those who took developmental mathematics. A greater percentage of students who took developmental mathematics at TCC received grades of B, C, and D at the four-year institution.

TRANSFER ANALYSIS FOCUS ON TOP THREE TRANSFER SCHOOLS

In order to provide a more detailed analysis of the transfer data received from four-year institutions, data specific to the top three transfer schools is presented in this report. The majority of TCC students transferred to ODU (55%), followed by NSU (14%) and VCU (9%). By examining data from each of these institutions, we can gain a better understanding of how TCC prepares almost 80% of its transfer students for success at a particular institution.

Old Dominion University

ODU has consistently been the largest transfer institution for TCC students. For the 1999-2001 transfer period, 55% of transfers chose ODU. This percentage, however, has decreased from the 1996-1998 reporting period when 63% of transfers chose ODU. While it is difficult to explain this decrease, perhaps students who applied and were accepted at more than one institution chose to

attend another school. Further evidence supporting this theory is the fact that the enrollment rate of accepted students at ODU decreased from 82% to 72% between the two reporting periods.

A total of 461 TCC students transferred to ODU, with 251 transferring in fall 1999 (54%) and 210 transferring in fall 2000 (46%). While at TCC, 87% of the students were enrolled in a transfer degree curriculum (AA/AS), compared to 8% enrolled in an occupational/technical curriculum (AAS/certificate). The majority (73%) of students were enrolled in General Studies (23%), Business Administration (18%), Science/Computer Science (18%), or Social Science (14%). After transferring to ODU, there were several popular majors. Figure 12 displays the majors chosen by at least 3% of transfer students. Information Systems and Interdisciplinary Studies were the most frequently chosen majors at ODU.

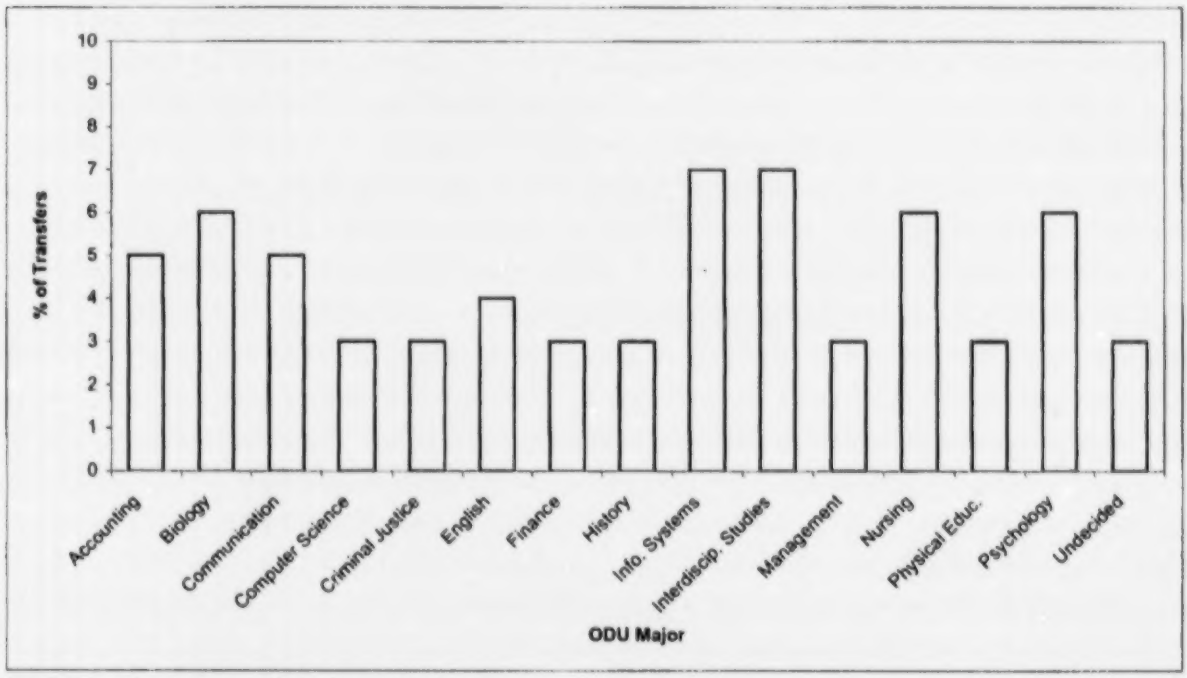

FIGURE 12. Majors at Old Dominion University

Of the 461 students who transferred to ODU, 250 graduated from TCC prior to transfer (54%). This is somewhat higher than the overall graduation rate for students who transferred during this time period (46%). The following table displays average GPA and credit information for graduates and non-graduates at TCC prior to transfer and at ODU.

TABLE 8

Average GPA and Credit Data at TCC and ODU			
Variable	TCC Graduates	Non-Graduates	Overall
	(n=250)	(n=211)	(n=461)
Credits Completed at TCC	69	43	57
Attempted Credits at ODU	23	25	24
Earned Credits at ODU	20	20	20
TCC GPA	3.12	2.99	3.06
ODU GPA	2.86	2.55	2.72

Graduates had significantly higher GPAs at TCC prior to transfer and at ODU compared to non-graduates, ($t(459)=2.78$, $p<.006$ and $t(459)=3.51$, $p=.0005$, respectively). As a result, ODU's transfer data suggests that TCC graduates perform better at ODU than non-graduates.

Norfolk State University

NSU has consistently been the second largest transfer institution for TCC students. For the 1999-2001 transfer period, 14% of transfers chose NSU. This percentage represents a slight increase from the 1996-1998 reporting period when 13% of transfers chose NSU.

A total of 114 TCC students transferred to NSU, with 64 transferring in fall 1999 (56%) and 50 transferring in fall 2000 (44%). While at TCC, 75% of the students were enrolled in a transfer degree curriculum (AA/AS), compared to 23% enrolled in an occupational/technical curriculum (AAS/certificate). The majority (68%) of students were enrolled in General Studies (29%), Social Science (25%), or Science/Computer Science (14%). After transferring to NSU, there were several popular majors as depicted by Figure 13. Nursing and Early Childhood Education were the most frequently chosen majors at NSU.

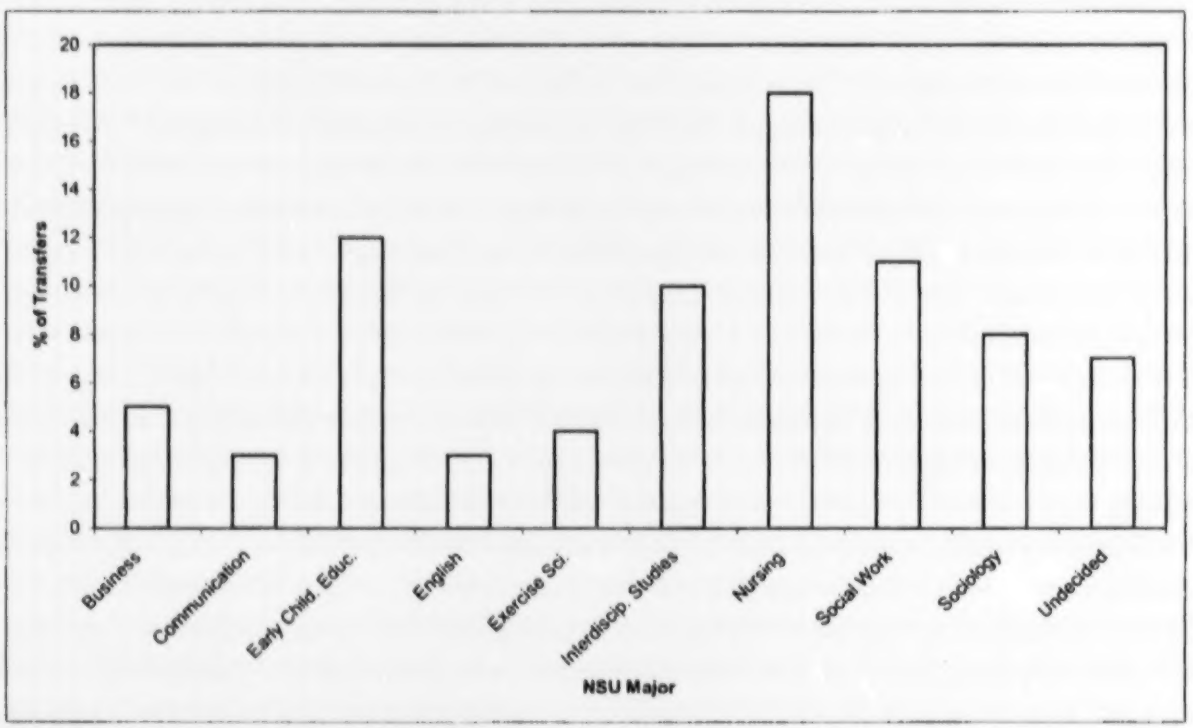

FIGURE 13. Majors at Norfolk State University

Of the 114 students who transferred to NSU, 38 graduated from TCC prior to transfer (33%). This is somewhat lower than the overall graduation rate for students who transferred during this time period (46%). The following table displays average GPA and credit information for graduates and non-graduates at TCC prior to transfer and at NSU.

TABLE 9

Average GPA and Credit Data at TCC and NSU			
Variable	TCC Graduates	Non-Graduates	Overall
	(n=38)	(n=76)	(n=114)
Credits Completed at TCC	62	36	45
Attempted Credits at NSU	27	22	24
Earned Credits at NSU	25	20	22
TCC GPA	2.95	2.76	2.82
NSU GPA	3.09	2.88	2.95

Graduates attempted significantly more credit hours and earned more credit hours at NSU compared to non-graduates, ($t(112)=2.5$, $p=.02$ and $t(112)=2.5$, $p=.01$, respectively). However, graduates did not have significantly higher GPAs at TCC prior to transfer or at NSU compared to non-graduates, ($t(112)=1.93$, $p>.05$ and $t(111)=1.27$, $p>.05$, respectively). As a result, NSU's transfer data suggests that while TCC graduates attempt and earn more credit hours than non-graduates at NSU, both graduates and non-graduates perform similarly.

Virginia Commonwealth University

VCU was the third largest transfer institution for TCC students this reporting period with 9% of transfers. This represents a very large increase from the 1996-1998 period when VCU accounted for less than 1% of TCC transfer students, and CNU was the third largest transfer institution with 7% of students. TCC has several articulation agreements in place with VCU for transfer students, and it is possible that students are more cognizant of the transfer opportunities.

A total of 78 TCC students transferred to VCU, with 32 transferring in fall 1999 (41%) and 46 transferring in fall 2000 (59%). While at TCC, 58% of the students were enrolled in a transfer degree curriculum (AA/AS), compared to 13% enrolled in an occupational/technical curriculum (AAS/certificate). Twenty-nine percent (29%) of students were unclassified which suggests that these students may have enrolled at TCC without the intent of graduating but to complete several courses before transferring to VCU. This is consistent with the fact that only 22% of students who transferred to VCU completed a degree at TCC prior to transfer which is much less than the graduation rate of transfers to ODU (54%), NSU (33%), and all transfers in general (46%).

The majority of transfer students to VCU were enrolled in one of two curricula. Twenty-seven percent (27%) of students were enrolled in General Studies at TCC, and 13% were enrolled in the Science/Computer Science curriculum. After transferring to VCU, there were three majors that attracted the majority of students. Nursing was chosen by 24% of transfers, followed by Business/Business Administration with 13% of transfers. Twelve percent (12%) of students chose Art, and an additional 8% chose an applied art/design major of Visual Communication or Interior Design. Thirteen percent (13%) of students were undecided about their major at VCU.

As indicated above, of the 78 students who transferred to VCU, 17 graduated from TCC prior to transfer (22%). The following table displays average GPA and credit information for graduates and non-graduates at TCC prior to transfer and at VCU. However, due to the relatively small number of graduates transferring to VCU, the data should be interpreted with caution.

TABLE 10

Average GPA and Credit Data at TCC and VCU			
Variable	TCC Graduates	Non-Graduates	Overall
	(n=17)	(n=61)	(n=78)
Credits Completed at TCC	75	31	41
Attempted Credits at VCU	26	24	25
Earned Credits at VCU	25	23	23
TCC GPA	3.16	2.85	2.91
VCU GPA	3.08	2.69	2.77

While graduates had significantly higher GPAs at TCC prior to transfer to VCU compared to non-graduates ($t(76)=2.05$, $p<.05$), the difference between graduates' and non-graduates' GPAs at VCU was not significantly different, $t(76)=1.65$, $p>.05$. This may be due to the relatively small sample size of students transferring to VCU. Based on this current VCU transfer data, TCC graduates and non-graduates perform similarly at VCU.

TRANSFER SURVEY

In addition to data received from four-year institutions, TCC attempts to obtain student perceptions of the transfer process. In spring 2001, surveys were mailed to 459 students who transferred during the 1999-00 academic year.[2] This allowed ample time for transfer students to reflect on their education at TCC and how well it prepared them for successful performance at the four-year institution. Completed surveys were received from 107 students, representing a 23% response rate that is typical of mail surveys. The Transfer Student Survey is included in Appendix B.

Approximately 77% of students responding to the survey indicated that their primary educational objective when first enrolling at TCC was to prepare for transfer to a four-year institution. For 85% of these students, their primary objective did not change while they were enrolled at TCC. After completing their coursework at TCC, the majority of students (76%) applied for transfer to only one institution. A number of students applied to two (15%) or three institutions (4%). Students applying for transfer usually were able to attend the college of their first choice. Eighty-nine percent (89%) of students indicated that the college they attended was their first choice, while 9% indicated it was their second choice.

Perceptions of the transfer process were generally positive. The majority of respondents (75%) reported that all of their TCC credits were accepted at the transfer institution. This is a slight increase from 73% who reported that all of their TCC credits were accepted in the 1999 survey. Eighty-four percent (84%) of students indicated that there were no major problems associated with the transfer. Regarding students' perceptions of their preparation for the academic environment of a four-year institution, 78% of respondents indicated that they felt prepared compared with 89% of respondents in the 1999 survey. The survey also questioned students about TCC's proficiency in preparing them for various demands of a four-year institution. Table 11 displays the percentages of students who felt that TCC was excellent, very good, and good at preparing them for the rigors of a baccalaureate institution.

[2] These students were selected based on the transfer data received as of spring 2001. The sample included transfers to GMU, MW, ODU, RU, UVA, UVA (Wise), VCU, and WM.

TABLE 11

Preparation for Demands of Four-year Institution					
Demand of 4-yr Institution	Excellent	Very Good	Good	Total Prepared (2001)	Total Prepared (1999)
Difficulty/Amount of Reading	12%	25%	42%	79%	86%
Writing Skills	22%	26%	34%	82%	87%
Vocabulary	16%	20%	53%	89%	89%
Speaking Skills	24%	29%	39%	92%	90%
Study Skills/Study Habits	15%	29%	38%	82%	85%
Math Skills	24%	22%	39%	85%	89%
Critical Thinking	16%	29%	35%	80%	87%
Computer Skills	23%	31%	32%	86%	84%
Problem Solving Skills	16%	30%	38%	84%	86%

Overall, 25% of students felt that TCC was excellent at preparing them for the transfer to a four-year institution. Additionally, 41% of students felt that TCC was very good, and 27% of students felt that TCC was good at preparing them for transfer. These percentages are nearly identical to those reported in the 1996-1998 Transfer Student Report. As of spring 2001, 87% of students responding to the survey indicated that they were attending a four-year institution either full- or part-time, and 96% expected to complete their four-year degree.

Based on the results of the transfer survey, the majority of students (93%) felt well prepared for transfer to a four-year institution and held favorable opinions about TCC. Nearly all students (97%) indicated that they would recommend TCC to a friend or acquaintance.

CONCLUSION

In conclusion, the current transfer student report provides a picture of the preparation of various groups that transfer from TCC to four-year institutions. These groups included graduates and non-graduates, students from both transfer and occupational/technical programs, students of various ethnic backgrounds, and developmental and nondevelopmental English and mathematics students. Based on the results, several conclusions can be reached concerning the relative preparation of students in these groups.

Students who graduate from TCC with a degree prior to transferring seem to have two advantages. First, generally, graduates have a higher acceptance rate at the transfer institution compared to non-graduates. This could be due in part to the fact that graduates usually have completed more credit hours at TCC prior to transferring, and this may be an important factor in admissions decisions. Overall, graduates also performed better than non-graduates at the transfer institutions as measured by GPA. However, results also showed that this might not be the case at every four-year institution. Results for the top three transfer schools showed that while graduates performed better than non-graduates at ODU, this was not the case at NSU or VCU. More detailed analyses also showed that the type of degree that a graduate received influenced performance at the four-year institution. Students who graduated with a transfer degree (AA/AS) performed better than those who graduated with an occupational/technical degree (AAS/certificate). Students who graduated with an AA degree showed the strongest performance.

The majority of students were enrolled in the General Studies, Science/Computer Science, or Business Administration curricula at TCC prior to transfer. While the majority of students did exhibit the expected "transfer shock" phenomenon, or decline in GPA after transfer, students in the General

Studies curriculum experienced the smallest decline in GPA after transfer. Students who were enrolled in the Business Administration curricula experienced the largest decline in GPA.

The majority of transfer students was Caucasian. However, a greater percentage of transfers were African-American and Asian compared to the previous transfer period. African-American transfer students experienced the least change in GPA after transferring, which may be due, in part, to the finding that 50% of African-American students transferred to NSU where on average, performance was better than performance at TCC prior to transfer.

The analysis of developmental English and mathematics students showed that while developmental English status seems to be an important indicator of performance at the transfer school, developmental mathematics status does not. Nondevelopmental English students performed better than developmental English students at the transfer institution, but both nondevelopmental and developmental mathematics students performed similarly. Also, nondevelopmental English and mathematics students received more A grades in English and mathematics courses at the four-year institutions compared to developmental English and mathematics students who received more B and C grades.

Overall, TCC students who transferred to a four-year institution felt that the transition was uncomplicated, and the majority of students reported that they experienced no major problems associated with transferring. The majority indicated that all of their TCC credit hours were accepted, and nearly all students indicated that they would recommend TCC. Students also felt that they were well prepared for the demands of a four-year institution. Results showed that nearly 80% of students or greater felt prepared for various demands of a four-year institution including reading, writing, speaking, mathematics, computer skills, problem solving, and study skills. Consistent with these self-perceptions, GPA performance data from four-year institutions showed that TCC transfer students were successful. Transfer student performance was above average or average during the first year of enrollment at the transfer institution. Further evidence suggests that performance of TCC students at ODU, the largest transfer institution, was equivalent to the performance of ODU's native students.

APPENDIX A

Four-Year Institution Abbreviations

Four-Year Institution Abbreviations	
Christopher Newport University	CNU
George Mason University	GMU
James Madison University	JMU
Mary Washington College	MW
Norfolk State University	NSU
Old Dominion University	ODU
Radford University	RU
University of Virginia	UVA
University of Virginia at Wise	UVW or UVA@Wise
Virginia Commonwealth University	VCU
Virginia Polytechnic Institute and State University	VPI
College of William and Mary	WM

APPENDIX B

Transfer Student Survey Instrument

TIDEWATER COMMUNITY COLLEGE
TRANSFER STUDENT SURVEY

1. How many hours per week did you work while attending TCC?
   ___ Didn't work ____ Under 10 hrs ____ 10-20 hrs ____ 21-30 hrs ____ More than 30 hrs

2. What was your primary educational objective when first enrolling at Tidewater Community College? ***(check only one)***
   _____ A. Prepare to transfer to another college or university
   _____ B. Improve career/occupational skills
   _____ C. Remedy or review basic skills
   _____ D. Study topics of interest or for self-improvement
   _____ E. Complete a 2-year degree at TCC
   _____ F. Other ***(please specify)*** _____
   _____

3. Did your primary educational objective change? _____ Yes _____ No
   If YES, what influenced the change? _____
   _____

4. Did you graduate with an AS, AA, or AAS degree at TCC before transferring? _____ Yes _____ No

5. Please rate any of TCC's services listed below that you used in planning your program of study:

USED SERVICE ?			Please use ✔ marks				
YES	NO	STUDENT SERVICES	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
		Academic counseling					
		Curriculum sheets					
		Faculty advising					
		Transfer guide					
		Catalog					
		Student handbooks					
		Career counseling					
		Other					

6. How many colleges/universities did you apply to for transfer? _____

7. What college/university was your 1st choice? _____

8. What college/university did you ultimately choose? _____

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9. Was the college you ultimately chose your

_____ 1st choice
_____ 2nd choice
_____ 3rd choice
_____ Other

10. Did your four-year college/university accept all of TCC's credits? _____ Yes _____ No
If **NO**, which credits were not accepted? _____

11. Did you have any major problems associated with your transfer? _____ Yes _____ No
If **YES**, please explain. _____

12. When you left TCC, were you prepared for the academic atmosphere of a four-year college? _____ Yes _____ No
If **NO**, in what areas could TCC have better prepared you? _____

13. Rate TCC's proficiency in preparing you to be successful in meeting the following demands of a four-year college:

Please use ✔ marks	**POOR**	**FAIR**	**GOOD**	**VERY GOOD**	**EXCELLENT**
Difficulty/amount of reading					
Writing skills					
Vocabulary					
Speaking skills					
Study skills/habits					
Math skills					
Think critically					
Computer skills					
Problem solving skills					

14. Would you recommend TCC to your friends or acquaintances? _____ Yes _____ No

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15. Overall, how would you rate the preparation you received at TCC for transfer?

_____ Excellent
_____ Very Good
_____ Good
_____ Fair
_____ Poor

16. Please indicate your educational status as of Spring 2001.

_____ Full-time
_____ Part-time
_____ Not continuing education at this time

17. Do you expect to complete your four-year degree? _____ Yes _____ No

If YES, approximately how long before you graduate?

_____ expect to graduate spring 2001
_____ 1 semester
_____ 1 year
_____ 1 ½ years
_____ 2 years
_____ Other ***(please explain)***

18. If you have any ideas on how to improve the transfer process, please comment in the space below.

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